

THE RELATIONSHIP AMONG TASKS, CENTERS OF GRAVITY, AND DECISIVE POINTS

**A MONOGRAPH
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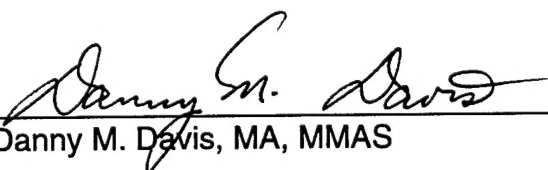
MONOGRAPH APPROVAL

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ABSTRACT

THE RELATIONSHIP AMONG TASKS, CENTERS OF GRAVITY, AND DECISIVE POINTS by MAJ Jeffrey A. Springman, USA, 45 pages.

At the operational and strategic levels, military planners use the concepts of centers of gravity and decisive points to assist them in determining the best ways for accomplishing assigned tasks. By identifying the enemy's center of gravity, the planner determines the enemy assets that must be defeated to gain victory. On the other hand, by identifying the friendly center of gravity, the planner has determined the friendly assets that must be protected to retain freedom of action to attack the enemy's center of gravity. Since it may not be possible to directly attack enemy centers of gravity, friendly forces attack formations, positions, or support structures that lead directly to the center of gravity. These are referred to as decisive points.

There is a hierarchical relationship among the assigned task, center of gravity for that task, and the decisive points on the path to the center of gravity. The given task is based upon the higher authority's desired outcome and is refined by the subordinate to become the unit's mission. The unit executing the mission determines the enemy and friendly centers of gravity based upon the mission / assigned task. The center of gravity chosen must be based upon the mission and can not be a generic center of gravity. If the chosen center of gravity is not based on the assigned task, accomplishing the mission probably will not compel the enemy to the desired action and may have far greater affects than desired. For example, the enemy's government may collapse leaving a vacuum rather than that government performing the desired action. This may happen anyway but if the action taken is limited by the desired endstate it is less likely to occur.

This monograph discusses the military theory of centers of gravity and its relationship to assigned tasks and decisive points. United States' joint and individual service doctrines and historical examples frame the discussion of theory. This monograph seeks to clarify the relationship among assigned tasks, centers of gravity, and decisive points to assist commanders and planners in determining how to best accomplish assigned tasks.

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I. Introduction.

Throughout history military leaders have searched for quick decisive victories. They believed that by destroying the key to their opponent's power they could gain the desired success. Clausewitz and the generations that have followed him refer to this key, as a center of gravity. Despite the energy expended in the search, almost all commanders have failed to achieve the quick victory without a marked advantage in leadership, doctrine, training, equipment, or numbers. Their victories, if they are even successful, are usually achieved by hard fighting. As military forces become more resilient, the quick victory against a peer or near-peer opponent will be even more difficult to achieve in the future. However, commanders must still determine how to best defeat their opponents. Concepts, such as center of gravity, exist in military theory and doctrine to assist commanders and planners in their quest for victory.

This monograph discusses the military theory of centers of gravity and its relationship to assigned tasks and decisive points. United States joint and individual service doctrines and historical examples frame the discussion of theory. This monograph seeks to clarify the relationship among assigned tasks, centers of gravity, and decisive points to assist commanders and planners in determining how to best accomplish their assigned tasks.

At the operational and strategic levels, military planners use the concepts of centers of gravity and decisive points to assist them in determining the best ways for accomplishing assigned tasks. By identifying the enemy's center of

gravity, the planner determines the enemy assets that must be defeated to gain victory. On the other hand, by identifying the friendly center of gravity, the planner has determined the friendly assets that must be protected to retain freedom of action to attack the enemy's center of gravity. Since it may not be possible to attack directly enemy centers of gravity, friendly forces attack formations, positions, or support structures that lead directly to the center of gravity. These are referred to as decisive points.

There is an hierarchical relationship among the assigned task, center of gravity for that task, and the decisive points on the path to the center of gravity. The given task is based upon the higher authority's desired outcome and is refined by the subordinate to become the unit's mission. The unit executing the mission determines the enemy and friendly centers of gravity based upon the mission / assigned task. The center of gravity selected must be based upon the mission and can not be a generic center of gravity. If the chosen center of gravity is not based on the assigned task, accomplishing the mission probably will not compel the enemy to perform the desired action, and may have far greater affects than desired. For example, the enemy's government may collapse leaving a vacuum rather than the government performing the desired action. This may happen anyway but if the action taken is limited by the desired endstate it is less likely to occur.

A possible method of utilizing the relationship among tasks, centers of gravity and decisive points is to use the higher level's decisive points as tasks for

the next lower level. The center of gravity for the lower level would then be determined based upon the assigned tasks. For example, a strategic decisive point could be a task assigned to an operational level unit. It could possibly be a center of gravity at the operational level or the center of gravity could be the same or very similar to the higher authority's. Therefore, a unit receives a task, determines the centers of gravity (friendly and enemy) based on that task. The unit then determines the decisive points based on the centers of gravity. Control of these decisive points are assigned as tasks for subordinate units to accomplish. This method provides advantages to commanders and planners by ensuring plans are nested, providing a framework to quantify ideas that are often abstract, assisting in phasing the operation, and identifying tasks to subordinate units.

II. Definitions.

Neither Joint Pub 1-02 nor FM 101-5-1 defines the term task. However, the American Heritage Dictionary of the English Language defines task as "[a] piece of work assigned by a superior or done as part of one's duties."¹ The dictionary states "assignment generally denotes clearly defined short-term work given to one person or persons by another who is in authority."² In the military tasks are assigned by authorized superiors, usually in the form of an order, and form the basis for missions.

Tasks performed by the United States military originate from the National Command Authorities (NCA). For smaller operations, the task may be passed

without change to the military unit that will perform the mission. For example, a special operations force conducting a hostage rescue may receive the order just as it was passed from the NCA. For larger operations, the tasks will be divided and assigned to various subordinate units. This process continues until all the units that will accomplish the tasks receive their portion of the tasks.

The primary or "essential task" assigned to a unit is refined into the unit's mission. The Joint Chiefs of Staff define mission as "[t]he task, together with the purpose, that clearly indicates the action to be taken and the reason therefor." It also states "...a duty assigned to an individual or a unit; a task."³ Commanders refine the assigned task into a mission for their unit. The assigned task and mission define and limit the action to be taken.

The Department of Defense (DOD) defines centers of gravity as "[t]hose characteristics, capabilities, and localities from which a military force derives its freedom of action, physical strength, or will to fight."⁴ The June 1993 edition of FM 100-5, OPERATIONS, defines center of gravity as "the hub of all power and movement upon which everything depends; that characteristic, capability, or location from which enemy and friendly forces derive their freedom of action, physical strength, or the will to fight."⁵ The second part of the definition is from the Joint Pub. The first part of the Army's definition is taken directly from Clausewitz, who refers to the center of gravity as "the hub of all power and movement, on which everything depends" and as "the point against which all our energy should be directed."⁶ Clausewitz is clear that the enemy center of gravity

is the point friendly forces should attack.

To Clausewitz, typical centers of gravity were the enemy's army, capital, or allies. Without a military, neither the country nor the monarch can compel the enemy to do its will and may be at the mercy of its foes. Clausewitz believes the army is the center of gravity the majority of the time. Today, most armies are too resilient and too large to be attacked as a whole. However, particular elements, units, or functions can be attacked. In open conflict or war, the operational and tactical centers of gravity will almost always be a military capability. The center of gravity is the part of the military that provides the means to resist or attack the friendly will. The military itself may not be a center of gravity but a capability or a part of it may be a center of gravity.

The capital city could only be the center of gravity if it is the heart and soul of the country and truly the hub of all power. The capital must be the administrative center, important for control of the country, and, also, the center of all social and political activities. The country would have to look to the capital for all guidance. The government in power could not possess the capability to govern outside the capital. This was more common in the nineteenth and earlier centuries but is possible today. Paris in the nineteenth century is a good example.

Allies could be centers of gravity if the ally is more powerful than the actual foe. Taking the ally out of the conflict by political or military means could deny the foe of his means to resist. All three are physical assets that can be

identified, not abstract ideas or capabilities. However, using only concrete assets as centers of gravity is too narrow of a usage because it ignores other sources of power.

The DOD definition leaves open the possibility for more than one enemy center of gravity by using the plural terms "characteristics, capabilities, and localities." Additionally, it uses the term "centers of gravity." It does not, however, state that a single center of gravity is not possible. Overall the definition is somewhat unfocused because centers of gravity do not exist in a vacuum. They interact with and are affected by the rest of the world such as the current political situation, etc. However, identifying only one center of gravity at each level of war for the enemy and friendly forces can better focus subordinates on defeating the enemy and accomplishing the desired endstate. The enemy center of gravity is the capability that provides the enemy the means to resist friendly will. This identification can assist commanders and planners in determining phases, branches and sequels, and priorities. It provides subordinates the guidance required to make decisions that support the overall intent. Identifying only one enemy center of gravity, the characteristic, capability, or in some cases locality that enables the enemy to resist, helps to focus the effort against that point.

According to FM 100-5, the center of gravity could be abstract or physical. The example of a physical center of gravity cited is the Republican Guard during the Gulf War. An example of an abstract center of gravity is the national will of

the enemy. It appears that national will could always be a center of gravity since there would be no conflict if the national authority, whether the authority is the people, a small group of leaders, or a dictator, had no desire to resist. However, national will may be more accurately described as a decisive point than a center of gravity. The problem is to identify the concrete assets that enable the enemy to continue the conflict and to target, with lethal and non-lethal means, these military or civilian assets, or the national will that lead directly to the center of gravity. Another example is identifying a capability such as the ability of North Korea to seize South Korea instead of the more concrete North Korean artillery as the center of gravity. The more concrete example of artillery ignores elements such as infiltrating units and heavy maneuver forces that North Korea can use to seize ground and damage South Korea. Even abstract centers of gravity lead to attacking physical assets. These assets are the decisive points to the center of gravity.

The definition of center of gravity does not relate centers of gravity to the assigned task or more specifically the desired endstate. While the definitions ignore a relationship between tasks and centers of gravity, doctrine recognizes that centers of gravity are tied to and limited by the assigned tasks and the desired endstate. The tasks and desired endstate must be based on the national objective of the war. Joint Pub 3-0 states "[w]hen other instruments of national power (diplomatic, economic, and informational) are unable or inappropriate to achieve national objectives or protect national interests, **the US**

national leadership may decide to conduct large-scale, sustained combat operations to achieve national objectives or protect national interests.”⁷ (Bold in original.) FM 100-7, Decisive Force: The Army in Theater Operations emphasizes the tie between national objectives and the military endstate that is achieved by defeating the enemy center of gravity. The FM states “[t]he destruction, dislocation, or neutralization of the enemy center of gravity should prove decisive in achieving strategic objectives.”⁸ If war is truly an “act of force to compel our enemy to do our will,”⁹ then the freedom of action, physical strength, or will to fight we want to deprive the enemy is the one that allows him to resist our will. The joint definition of war is similar to Clausewitz. JP 5-00.1 defines war as “...armed hostile action...to achieve vital national objectives.”¹⁰ The tasks given to subordinate units must lead directly to the achievement of the vital national objectives. If the assigned tasks are incorrect or the subordinate’s chosen center of gravity are not related to the assigned task, then the operation will probably not achieve the vital national objective.

Authors often illustrate the concept of military centers of gravity with the use of centers of gravity in mechanics. An object’s center of gravity is the spot where gravitational forces acting on the object are concentrated to a single point. Force applied to this point will move the object the same distance as more force applied to other points. However, they often fail to mention that if the object is to be moved to a desired location, that the mover believes is more advantageous to him, then the force can not be applied randomly. It must be applied as a vector

with the correct amount of force along the desired direction. Likewise, in military operations, the force can not be applied randomly but must be applied in the direction of the desired endstate. Hence, a generic center of gravity is not feasible. The center of gravity can only be determined after analysis of the assigned task and desired endstate. This helps to illustrate why correct identification of the center of gravity is critical.

According to FM 100-5, the center of gravity could be a characteristic. The American Heritage Dictionary of the English Language defines characteristic as “[a] distinguishing feature or attribute.”¹¹ If a characteristic is identified as the center of gravity, attacking and destroying the characteristic should compel the one to do the will of the other. However with resilient and articulate militaries, loss of a particular characteristic should not sap the loser of all his power or freedom of action. For example, loss of a particular command and control system or air defense system may limit and force an enemy to rely on a different system or tactics but not deny him freedom of action or all his power. The enemy could continue the struggle while its capabilities would become more asymmetrical. All means that allow resistance must be considered and attacked, if appropriate, not just one.

According to FM 100-5 and joint doctrine, the center of gravity could, also, be a capability. The American Heritage Dictionary of the English Language defines capability as “physical, mental, or moral capacity...[t]he capacity to be used, treated or developed for a specific purpose.”¹² If two coalitions, nations or

even sides within a nation have goals that are in conflict with the other's or if war exists between the two, then each has developed elements of national power for the specific purpose of resisting the will of the other or imposing their will on the other. These elements could be diplomatic, informational, military, or economic. When a state of war or even a violent conflict exists, the state will rely more on its military power. By attacking the specific enemy capability that opposes the friendly mission, a force is denying the enemy freedom of action and is attacking the enemy hub of power as it relates to the friendly task. The objective is to defeat the capability that provides the enemy the means to resist.

The use of the term locality in the definition of center of gravity implies that geographical points can be centers of gravity. Currently, this is probably more true at tactical levels than at strategic levels. In the past, it may have been truer at all levels. Examples of locality centers of gravity include Clausewitz' capital, such as Paris during the Franco-Prussian War; at a lower level, it may be a piece of key terrain whose occupation by friendly forces drives the enemy from the local area. At the strategic level, it is unlikely that a locality would be a center of gravity for a peer or near-peer enemy.

The other services, Navy, Marines, and Air Force, also use the term center of gravity. Their definitions, like the Army's, differ somewhat from the joint and sister service definitions but retain several similarities.

The Navy's definition, from the glossary of Naval Doctrine Publication 1, Naval Warfare, is almost exactly the same as the definition in Joint Pub 1-02

except that all plurals are changed to singular. This reflects the Navy's view that there can be only one center of gravity. As shown earlier, the use of only one center of gravity can assist subordinates in focusing their combat power on the appropriate target. If more than one center of gravity is determined, the problem becomes which one has the priority, although theoretically they are all the "hub of all power". On page 35, the publication lists a long resupply line on which the enemy is dependent as a possible center of gravity. For example, two nations are at war or in conflict over an island area. The national objective of the friendly nation would be to control or deny control of the island area to the other nation. The national objective would be to drive the enemy from the island area. Maritime and air forces could sever the air and sea lines of communications and, in theory, compel the enemy to relinquish control of the island area. The resupply line may be a center of gravity at the operational level but at the strategic level it would probably be a decisive point. If the severed line ended enemy resistance, it probably did so because the enemy no longer had the capability to defend or control the island area. This capability could have been attacked by other means and the lack of the capability is the reason the enemy was compelled to do our will. The capability or means of the enemy to control the island area is the real center of gravity because the national objective is to drive the enemy from the island area. Severing the supply line will not necessarily do this as other means or lines of resupply could be used. Severing the supply line provides the "marked advantage" discussed with decisive points.

The Marine Corps' FMFM 1, Warfighting, and FMFM 1-1, Campaigning, do not define center of gravity. The Marines' role as an air, land, and maritime force leads to strong similarities between the Marine Corps' and other services' doctrines. FM 101-5-1, Operational Terms and Graphics, is also approved by the Commanding General Doctrine Division of the Marine Corps as Marine Corps Reference Publication 5-2A. However, the maintenance of Marine combat development centers and their own school system lead to Marine specific doctrine and thinking. Dr. Joe Strange of the Marine Corps War College recommends that center of gravity be defined as "[p]rimary sources of moral or physical strength, power and resistance."¹³ While this definition is not an official Marine Corps definition, it illustrates a line of thought in the Marine Corps. The definition is not very different from the others. It does indicate, as Dr. Strange states in his monograph, that there may be more than one center of gravity at each level of war. He does state however that one would be ideal. This definition, like the others, does not directly link the center of gravity to the national objective as a necessary step but this could be due to the monograph dealing more at an operational and tactical level than a strategic and operational level. At any level, the center of gravity must be linked to the assigned task or the enemy may not be moved to the desired position.

Air Force Doctrine Document 1 uses the Joint Pub 1-02 definition for centers of gravity in the glossary. However, on page 51 in the base document, the term "military force" is written as just "force." This may be a more accurate

definition since a nation's power is not solely based on military power. An opponent's strength may not rest on military strength but on another element of national power, which could be attacked by lethal or non-lethal means.¹⁴ In his book, The Air Campaign, (not an official Air Force Publication), COL. John Warden describes centers of gravity as "that point where the enemy is most vulnerable and the point where an attack will have the best chance of being decisive."¹⁵ There is little doubt that an attack that defeats a center of gravity will be decisive if the defeated object is truly a center of gravity. However, the center of gravity is probably not where the enemy will be most vulnerable. The American Heritage Dictionary of the English Language defines vulnerable as "1. Susceptible to injury; unprotected from danger. 2. Susceptible to physical attack; insufficiently defended."¹⁶ It is unlikely the enemy will leave their center of gravity unprotected. Joint Pub 3-0 states that instead of being unprotected centers of gravity will more likely be very well protected. This situation forces nations to attack decisive points leading to centers of gravity. The Joint Pub does state that analysis of centers of gravity assists in determining strengths, weaknesses, and vulnerabilities. COL. Warden believes there could be more than one center of gravity but he mentions centers of gravity leading to "ultimate" centers of gravity. This may be a mixing of the concepts of centers of gravity and decisive points. Decisive point is not an Air Force term despite its use in Joint Publications. He does believe victory is achieved by "striking decisive blows."¹⁷ He also indicates that these blows should be simultaneous and

sequential similar to attacking decisive points leading to centers of gravity.

The preceding definitions of centers of gravity are all fairly adequate except they all fail to mention the requirement to link the center of gravity to the task assigned by the higher authority, and ultimately to the national objective. Centers of gravity are tied to the assigned task to ensure the military operation supports the national objective. Likewise, centers of gravity must be linked to the tasks assigned to subordinates. The link between the superior's center of gravity and the subordinate's task are decisive points. Joint Pub 3-0 states, "[t]he commander designates the most important decisive points as objectives and allocates resources to control, destroy, or neutralize them."¹⁸

While Joint Pub 1-02 does not define decisive point, Joint Pub 3-0 states, "[b]y correctly identifying and controlling decisive points, a commander can gain a marked advantage over the enemy and greatly influence the outcome of an action....they are the keys to attacking protected centers of gravity."¹⁹ Joint Pub 3-0's discussion on geographical decisive points describes the advantage the Remagen Bridge provided. The bridge allowed the Allies to "maintain the momentum of the attack and sustain the initiative."²⁰ Joint Pub 1-02 does define a term that is similar but not an exact match. The publication defines critical point as "[a] key geographical point or position important to the success of an operation...In point of time, a crisis or a turning point in an operation."²¹

FM 100-5, OPERATIONS, defines decisive points very similarly to Joint Pub 3-0. It states, "Decisive points provide the commander with a marked

advantage over the enemy and greatly influence the outcome of an action. Decisive points are often geographical ... they are the keys to getting at the centers of gravity."²² The "marked advantage" gained can be positional such as the Allied capture of the Remagen Bridge. It denied the Germans the use of the Rhine as an operational obstacle and provided the Allies with a relatively easy route to the heart of Germany. Jomini, also, describes decisive points as geographical in the Art of War. He writes, "... the name of *decisive strategic point* should be given to all those which are capable of exercising a marked influence either upon the result of the campaign or upon a single enterprise."²³ Other examples of decisive points listed by the FM are command related and include headquarters, and communications centers.

While FM 100-5 states that decisive points are "often geographical" or "could also include elements that sustain command," FM 101-5-1 includes "enemy formations"²⁴ in the definition. Examples of this include destruction of enemy units or capabilities such as destroying his reserve, ADA, field artillery, or command and control system. Gaining superiority of the air or sea could also be a decisive point especially for a force projection military. FM 101-5-1 continues, "A time or location where enemy weakness is positioned that allows overwhelming combat power to be generated against it. ...[A] time when the combat potential of the enemy force is degraded."²⁵ Examples of decisive points in time could be when air superiority is gained or the ADA is suppressed or when a specific capability is destroyed or lost. Since the enemy's means to resist are

often military, enemy formations will often be decisive points. The enemy formations may be decisive points more often than geographical decisive points especially for a force oriented task. "A decisive point is any location in space-time that affects the physical, cybernetic, or moral ability of the"²⁶ enemy to resist accomplishment of the assigned task.

The other services, excepting FM101-5-1 as a Marine Corps manual, do not define decisive points in Air Force Doctrine Document 1, Navy Doctrine Publication 1, or FMFM 1.

There are relationships among assigned tasks, centers of gravity, and decisive points in theory and current US doctrine. Tasks are received from a higher authority and refined into a mission statement at the receiving unit. The mission / task is analyzed and, friendly and enemy centers of gravity are determined based upon the assigned task. Protecting friendly centers of gravity and defeating enemy centers of gravity will lead to victory. While centers of gravity may not be assailable, points leading to centers of gravity are assailable. These points are decisive points and are determined based on the center of gravity. Control, destruction, or neutralization of these points open the enemy center of gravity to defeat or protect the friendly center of gravity from attack. The true key to victory. Commanders and planners can use this relationship to assist in planning and executing operations.

III. Method.

The steps required to use this relationship to an advantage are easily

integrated into both the Joint Operations Planning and Execution System (JOPES) and the Army's Military Decision-Making Process (MDMP). Using the relationship among tasks, centers of gravity, and decisive points will add more analysis and brainstorming to the beginning of both JOPES and MDMP. This method requires six steps that can be accomplished within JOPES and MDMP with little or no change. It will require more a change of thinking and, perhaps, a more formalized system. The six steps follow.

- 1) Receive Task
- 2) Mission Analysis
- 3) Determine Centers of Gravity
- 4) Analyze Centers of Gravity
- 5) Determine Decisive Points
- 6) Develop Concept

Step 1. Receive Task. The commander may receive a task from a variety of sources, such as the Joint Strategic Capabilities Plan (JSCP), an operations order or plan, he may anticipate a task based on the situation, etc. The assigned tasks support achievement of the national objective or the higher authority's mission. The higher's intent and desired endstate should be known as well as the assigned task.

Step 2. Mission Analysis. This step is critical to determining what the NCA or higher headquarters truly wants accomplished. If the commander believes the assigned task will not accomplish the objective or the intent of the higher authority, he must seek clarification or recommend a change to his assigned task. After the commander understands the essential task fully, he will determine and state the command's mission. During this phase as much

pertinent information as is possible about the friendly, enemy, and terrain situations is gathered. When the commander and staff have an appreciation of the assigned task and current situation, they can begin to determine how to best accomplish the task.

Step 3. Determine Centers of Gravity. As discussed earlier, the center of gravity and decisive points have to be determined in concert with the political goals of the conflict. This assumes that the tasks assigned support the national objective. According to Clausewitz, "war is only a branch of political activity; that it is in no sense autonomous."²⁷ Likewise FM 100-5 states, "Determining how war (or military operations) accomplishes the national objectives is the critical first step in the operational planning process."²⁸

If the political aim is limited such as to liberate Kuwait, the center of gravity will be different than if the aim is the unconditional surrender of Iraq. In the first case, the center of gravity could be Iraq's ability to hold and threaten Kuwait; in the second case, it could be Saddam Hussein or the Ba'ath Party leadership. During open conflict or war, the center of gravity at the operational level will almost always be a capability of the enemy's armed forces. The center of gravity is the capability that provides the enemy's military the means to resist.²⁹ When political aims and strategic centers of gravity are aligned the first step in nesting missions has been accomplished. This helps ensure the military element of power is linked to the national objective.

The selected friendly and enemy centers of gravity must be suitable,

feasible, and acceptable. For suitability, the question that must be asked is, will defeating this center of gravity accomplish the assigned task? For a friendly center of gravity, the question is, will preserving this center of gravity preserve freedom of action for friendly units? To be feasible, it must be possible to attack the decisive points leading to the center of gravity using the available resources and having a reasonable expectation of success. To be acceptable, defeating the enemy or protecting the friendly center of gravity must be acceptable in terms of cost in personnel, equipment, time, money, etc. The enemy center of gravity and its associated decisive points must be legitimate targets by the law of war if lethal means are to be used against them. Additionally, defeating the enemy can not cause unacceptable damage to the enemy such as the downfall of the government or the complete destruction of its armed forces when a lesser endstate was desired.

Continuing with the previous example, the task is to eject Iraq from Kuwait and ensure Iraq is not a threat to Kuwait's sovereignty. The enemy's strategic center of gravity is Iraq's ability to hold Kuwait. When determining the enemy's center of gravity the important question is, will defeating the proposed center of gravity force Iraq to withdraw from Kuwait and end the threat of immediate re-invasion? If the Republican Guard are considered the center of gravity, will defeating or destroying the Republican Guard force Iraq out of Kuwait? If Iraq has other ground units capable of holding ground in Kuwait, the answer is no. These other units will have to have their will broken so they withdraw; to be

attacked and driven out; or, starved out. Iraq has to physically hold Kuwait with its military since Kuwait is willing to resist and no major power accepts Iraqi domination of Kuwait. When the military is the only element of power that provides the means to resist, a military capability will be the center of gravity. However, in other cases, especially operations other than war, strategic centers of gravity may be diplomatic, economic, or informational. For instance, the key to an independent Croatia and Slovenia was probably the quick recognition of their independence by major Western powers and the United Nations not their militaries.

Step 4. Analyze Centers of Gravity. Analysis of the centers of gravity determines strengths, weaknesses, and vulnerabilities of both friend and foe. Strengths are the sources of power that ultimately must be defeated but may be too powerful to fail or fail relatively easily under attack. If possible, they should not be attacked directly. A weakness is where a force is more likely to break under pressure. A vulnerability is a point where or when the force is susceptible to attack. If possible a vulnerable weakness should be attacked. This should open more of the strength to attack and ultimately lead to its defeat. For example, two forces may have similar equipment with the exception that one force has limited night fighting capability while the other has a robust night fighting capability. The one force would be vulnerable to night attack. If its air defense systems, not known for being well protected against air and artillery, were destroyed by night air and artillery attacks, the whole force would be

susceptible to night and day attacks. If coordinated properly, the air, artillery, and maneuver could defeat the enemy's strength by first attacking vulnerabilities and weaknesses.

Step 5. Determine Decisive Points. The decisive points are based on the centers of gravity and the analysis of the centers of gravity. In essence, they form the best path to attack and defeat the enemy. They take advantage of his weaknesses and vulnerabilities to get at his strength. Weakness and vulnerable are relative terms. These are where the enemy is most weak or vulnerable; however, his force or formation at the decisive point may still be robust. This may lead to attrition warfare for a period.

Although the strategic center of gravity is a capability and abstract, the ability of Iraq to hold Kuwait, the decisive points are concrete, the Republican Guard, combat aircraft, etc. These decisive points become operational tasks. The operational centers of gravity are determined from the assigned task such as the ability of the Republican Guard to hold or threaten Kuwait. The decisive points derived from this center of gravity are tasks for tactical units.

Some decisive points key to the center of gravity are the Republican Guard, combat aircraft, weapons of mass destruction, and theater ballistic missiles, some of which have the ability to attack targets outside Kuwait and Iraq, and the ability to sustain and reinforce units in Kuwait. These decisive points become the tasks from which operational forces determine their centers of gravity. The defeat of the Republican Guard becomes the task for the VII Corps.

The air component has responsibility for Iraq's combat aircraft and theater ballistic missiles with support from special operations forces. Defeating Iraq's ability to sustain and reinforce forces in Kuwait is the responsibility of the air component commander followed by the XVIII Corps when the Corps maneuvers to cut the lines of communications between the Kuwaiti Theater and Iraq. The Marines and Arab forces are tasked to seize terrain and defeat forces in sector. The strategic decisive points the units attack are geographical, enemy formations, and temporal. The mission of XVIII Corps is geographical and temporal, it has to cut Kuwait from Iraq before the Republican Guard can pull out or reinforcements can move into Kuwait. The air component commander and VII Corps are attacking formations as their primary tasks. The VII Corps center of gravity for this mission is the assets that give the Republican Guard the means to resist.

In the Gulf War example, the decisive points leading to the accomplishment of these missions are the physical, cybernetic, and moral assets that allow Iraq to resist. They form the tasks for tactical units. The VII Corps had to breach a major obstacle, defeat units it encountered prior to the Republican Guard, and defeat the Republican Guard. For the VII Corps, decisive points include defeating the Iraqi artillery that could range the breach, breaching the obstacles and defeating Iraqi units on its route to the Republican Guard, maneuvering into attack positions vicinity of the Republican Guard, and attacking and defeating the Republican Guard. Subordinate units receive their tasks

based on the decisive points of their higher headquarters.

FM 100-7 states, "the CINC selects the strategic center of gravity and subordinates select decisive points on the path to attacking the center of gravity."³⁰ However, this is wrong since the CINC must determine decisive points and apply resources to destroying and controlling them. The headquarters issuing the task must determine the decisive points and assign them or parts of them to subordinate units.

Step 6. Concept Development. Once the center of gravity and decisive points have been determined, course of action development can begin. Resources can be allocated to control or destroy the decisive points. How these resources are applied form the basis of the various courses of action. Determining how to apply resources against the various decisive points and, ultimately, the center of gravity, assists the commander in visualizing the phases of the operation, sequencing actions within a phase, planning branches and sequels, and determining priorities during the operation.

Phases mark a significant change in operations. According to FM 100-7, "Phases may orient on a physical objective or on establishing a certain advantageous condition."³¹ The phases may include gaining air or sea superiority, defeat of the enemy's artillery in a certain area, etc. If the task is to defeat the enemy's defense and force it from an area, the enemy's center of gravity is its capability to hold the area. The decisive points leading to the center of gravity may include his will to hold the area, logistical sustainability of his

forces, fire support, and the maneuver forces that actually hold the ground. If the enemy does not voluntarily withdraw because he no longer has the will to resist, friendly forces will have to drive him out. A possible sequence of phases includes gaining and maintaining air superiority, isolation of the area of operations, defeat of his artillery, and defeat of the defending maneuver forces. Accomplishing these tasks in a different order or applying resources differently yields a different course of action. Assigning these tasks to subordinate units begins this process at their level. The commander would accomplish as many of these tasks at the same time as is feasible.

The method assists in planning for branches and sequels by helping the commander visualize the operation at its various points. This should make possible enemy reactions clearer and more easily identifiable. As the enemy reacts to the events, his weaknesses and vulnerabilities may shift to different points but his center of gravity would remain the same as long as the assigned task remains the same. If a correct task was given and proper analysis was conducted, the path of decisive points leading to the center of gravity may change due to enemy reactions but the center of gravity itself will not change.

The method assists in determining priorities by identifying the capability required by both the friendly and enemy to resist the will of the other. Once the capability is identified, the assets that make the capability possible are identified. Other assets should be attacked only if protection requires they be attacked. The order in which the decisive points are attacked will determine the priority of

attack on the assets required by the center of gravity.

Using this method the levels of war are nested from the political aim to the tactical level. All friendly elements are focused on decisive points that are key to the enemy's center of gravity. While the center of gravity may be abstract defeating it is quantifiable and is accomplished by destroying or controlling the decisive points. This method assists in phasing the operation by determining the points when major advantages are gained allowing the plan to move to the next phase. Once the decisive points are identified, tasks to subordinate units are identified.

JOPES consists of two subsystems, deliberate planning and crisis action planning. Deliberate planning consists of five phases. During Phase 1, the initiation phase, the combatant commander receives the task. Phase 2 is the concept development phase. Phase 3 is the plan development phase. Phase 4 is the plan review phase. Phase 5 is the supporting plans phase. All six steps of the relationship method fall within the first three phases of deliberate planning. During Phase 5, subordinate units would use the method to assist their planning. During phase 1, the commander receives the task. During Phase 2, mission analysis is conducted, friendly and enemy centers of gravity are determined, the centers of gravity are analyzed, decisive points are determined, and the concept is partially developed. The concept is finalized in Phase 3, the plan development phase.

Crisis Action Planning consists of six phases. Phase 1 is the situation

development phase. Phase 2 is the crisis assessment phase. Phase 3 is the course of action development phase. Phase 4 is the course of action selection phase. Phase 5 is the execution-planning phase. Phase 6 is the execution phase. All six steps of the method fall within Phases 3, 4, and 5 of crisis action planning. The task is received or implied in Phase 3. Additionally, during Phase 3, mission analysis, is conducted, centers of gravity are determined and analyzed, decisive points are determined, and the concept is partially developed. During Phases 4 and 5 the first five steps are refined and the concept is thoroughly developed.

The Army's MDMP consists of seven phases. Phase 1 is receipt of mission. Phase 2 is mission analysis. Phase 3 is course of action development. Phase 4 is course of action analysis. Phase 5 is course of action comparison. Phase 6 is course of action approval. Phase 7 is orders production. The six steps of the method are used in the first six phases of MDMP. The task is received in Phase 1. The mission analysis, determination of centers of gravity, analysis of centers of gravity, determination of decisive points occur in Phase 2. Concept development occurs in Phases 3, 4, 5, and 6. Subordinate units would use a similar process once they receive their essential tasking.

Proper use of the relationships among tasks, centers of gravity, and decisive points should assist the commander in accomplishing his mission. The method is to determine the enemy and friendly centers of gravity based on the task received. Next, the decisive points are determined based on the center of

gravity. These decisive points are assigned to the subordinate units as tasks. The subordinate unit will conduct a similar process. In this manner all our force can be focused on defeating the enemy's strategic center of gravity and maintaining our own. This method must be an integrated process as determination of different centers of gravity lead to different decisive points and, hence, different tasks for subordinates.

IV. Historical Examples.

The American Civil War – Approaching total war. The American Civil War is somewhat unique in history. It was both a factional and regional civil war. The United States was divided with the eleven southern-most states forming a new government and the twenty-three most northern states plus California and Oregon remaining with the federal government³². There were two main issues that divided the two regions. The South favored retaining the institution of slavery and allowing states the right to secede from the Union. In 1861, they formed what they considered their new legitimate national government called the Confederate States of America. While the Confederacy had to establish a new national government, the state and local governments were already in place. The other states, including four slave states, did not have to establish a government; they maintained their ties to the established government of the United States of America. These states believed the union was eternal and states could not join or secede on their own whims. Additionally, there was a strong anti-slavery movement in the northern states but anti-slavery was not a

popular goal, at least initially. With an established bureaucracy and a national identity the North was able to retain the majority of the pre-war regular military forces. The South did have several regular officers resign from the old national forces and join their military. The South was also able to call upon the established state militias. There were no major ethnic, language, religious, or cultural differences between the majority of northerners and southerners. While there were substantial differences between the industrial capacity of the North and South, both regions were mainly agrarian.

While the goals of opposing sides are not always diametrically opposed, the national objectives or tasks of the North and South can be looked at as the opposite of the other's objective. The USA wanted to maintain the union. The CSA wanted to dissolve the union and establish itself as a nation.

From the USA's perspective, the friendly center of gravity was their capability to re-establish control over the region in rebellion. A majority of this capability resided in the federal army. However, diplomatic, economic, and informational means were also necessary at the national level. Diplomacy was necessary to keep other major powers out of the war. The northern economy had to support the large military and maintain an acceptable standard of living for the nation as a whole. The informational was necessary to maintain the will, and assist in defeating southern will and keeping the foreign powers out of the conflict. The enemy's (CSA) center of gravity was the South's capability to establish a government that provided the same security and benefits of the old

government while allowing the states a greater amount of autonomy and the continuance of slavery. Would defeating the CSA military alone re-establish the USA? No, since the people, the group that wields the most power in a democracy, could still resist. The willingness of the people to accept federal rule was due partly to their generally good treatment, such as maintenance of individual rights, as well as the military surrenders. The people had to be convinced that life in the USA was better than in the CSA. This required the use of all elements of national power. Was the national will of the USA the friendly center of gravity? No, because the will is only half of the required resources, the means to carry out the will are the other half. The North had to develop the capability to re-establish the Union while maintaining the will.

The decisive points leading to the South's center of gravity were recognition of the CSA as an independent nation, the Confederate military, maintenance of the integrity of national territory, developing a sense of CSA nationality, and the will of the people. If the USA could defeat the CSA effort to be recognized by the major powers, the USA would have the "marked advantage" of containing the war as an internal or civil war not a war between nations. The major powers would refrain from involvement in a problem internal to the USA. If an entity wants to be considered a nation, it must be recognized by other nations. In reality being recognized by minor nations does not establish true international recognition. It is only when major nations recognize the entity and deal with it on an equal basis that a nation is recognized as a member of the

world's nations. If the USA could destroy the territorial integrity of the CSA by occupation of certain areas, key terrain, and destruction of other key terrain, it could regain control of the occupied territory, deny the CSA ability to effectively govern some territory, and reduce the credibility of the CSA to other nations. This would also defeat the CSA ability to create its own sense of nationalism by disrupting the flow of trade and communications between the separated sections. The "marked advantage" gained by defeat of the southern military was destroying southern credibility and the ability to resist the USA military in open combat. The national will of the South could be defeated by convincing, through whatever means, the majority of the Confederate people that life in the old union was more preferable than life in the Confederacy. Since most Confederates did not own slaves and states had some autonomy, life for the common man was not much different in the Union than the Confederacy. Hence, reducing the standard of living in the Confederacy is a method that could be used to attack the will of the people.

At the national level the North used all elements of national power to control or defeat CSA decisive points. The task given to the military elements were to destroy the Confederate armies in the field, blockade its ports, and occupy its territory.

Step 2. Mission Analysis. Since the War and Navy Departments did not fall under a DOD at the time. The Navy had the task of blockading the South's ports with support from the Army. While the Army, supported by the Navy, was

responsible for the other two tasks. Of these two tasks, destroying the Confederate forces in the field was the priority. Due to the size of the CSA, the North could not occupy all the territory and destroy the fielded forces. After the forces were destroyed, the territory could be occupied more easily. Territory that gave the USA a "marked advantage" over the CSA was occupied. Some key terrain was destroyed, such as rail lines, the Shenandoah Valley, etc. The endstate, a re-established USA, required that the federal government must be able to exert its power throughout the entire nation. Since the southern states were in revolt, the local authorities supported the CSA. This required that federal authority is re-established with the Army and, eventually, federal courts and marshals exerting control. Finally, the power could be returned to local authorities.

Step 3. Determine Centers of Gravity. The enemy center of gravity was the South's forces in the field. The friendly center of gravity was the ability to project combat power throughout the CSA. Does defeating the South's ability to maintain forces in the field destroy the armies? Yes, fielded forces require replacements for losses, resupply, morale, and command and control. These elements are all decisive points. At the same time, the fielded forces are required to defend the resources from attack. The loss of all or a part of these resources would reduce or eliminate Clausewitz' "advantages of the theater of operations". Clausewitz states, "[b]y initiating the campaign, the attacking army cuts itself off from its own theater of operations, and suffers by having to leave its

fortresses and depots behind. The larger the area of operations that it must traverse, the more it is weakened - by the effect of marches and by the detachment of garrisons. The defending army, on the other hand, remains intact. It benefits from its fortresses, nothing depletes its strength, and it is closer to its sources of supply."³³ Of course if it loses its bases to the attacker, the defender loses the benefits of this relationship. Does protecting the North's capability to project power throughout the South maintain the freedom of action required to defeat the South's center of gravity? By developing and maintaining an Army capable of offensive action and large enough to fix southern forces while still having forces available to attack other locations, and a Navy capable of blockading southern ports and transporting Federal troops and supplies along the seaboard, the North was able to use its strategy to destroy the South's military. The North used its center of gravity effectively to attack the South's center of gravity. If the North would have wasted these resources or not have used them, the South could have accomplished its objective.

Step 4. Analyze Centers of Gravity. The strengths of the southern military center of gravity are the military leaders and their tactical abilities on the battlefield, the proximity of the forces to major sources of food and horses, and the proximity of the armies to railheads that can carry replacements and other supplies. Additionally, the morale of the forces could remain high as long as their families were safe, they were equipped and supplied well, and they were victorious. These strengths may be centers of gravity at the operational or

tactical levels. The weaknesses of the southern military center of gravity were the requirement to defend the entire Confederacy, the South's much smaller population base, the South's much smaller industrial base, the lack of a Navy, the ability to rebuild or maintain infrastructure, and the requirement to watch/guard the slaves. In this case, all of the weaknesses were also vulnerabilities. The North would eventually attack all of the weaknesses. If the North could win battlefield victories, threaten the well being of the soldiers' families, and reduce the material well being of the soldiers, the South's high morale could be destroyed magnifying the southern weaknesses. These weaknesses form the basis of the decisive points.

Step 5. Determine the Decisive Points. The decisive points leading to the South's center of gravity were the seizure of key terrain subject to attack because of the South's defend everything policy. These included Forts Henry and Donelson, New Orleans, Vicksburg, Atlanta, etc. The blockade of the seaports became more effective as the North's Navy and Navy/Army cooperation grew. The South's inability to fully resource its fielded armies with personnel and supplies which became critical as Grant directed Meade's, Sherman's, and other attacks to simultaneously engage all major CSA forces. Lee's army continued to receive most of the resources as the main effort. However, the other armies suffered and were eventually dominated by the much better resourced northern forces. This had the effect of opening more area and infrastructure, which were also decisive points, to attack. In 1864 as northern operations began under

Grant, the South had lost basically the Mississippi Valley, Tennessee, parts of its coast, and parts of northern Virginia. In just over a year of constant campaigning the war would end with the armies of the Confederacy destroyed. The South's ability to maintain fielded armies was defeated by Sherman and his "marches", Thomas' defense in Tennessee, Sheridan in the Valley, seizure of more critical ports, and raids by other northern forces. As these actions occurred, Lee's army had been fixed and slowly destroyed by Meade in front of Richmond and Petersburg. As the southern armies were destroyed, the Federal army was able to occupy the South without a threat to the garrisons. By not attempting to occupy the entire South as they moved through, the Federals were able to limit the effect of the "advantages of the theater of operations" Clausewitz described. Some of the decisive points for the northern center of gravity included naval (ocean and river) supremacy, its transportation capability, and its large capable armies.

The northern army was able to accomplish its task by defeating the South's forces in the field. The North did not destroy the South's forces in one decisive battle but by campaigns that attacked the decisive points of the center of gravity. These same actions helped the North's forces protect their own center of gravity. The American Civil War demonstrates the relationship among tasks, centers of gravity, and decisive points.

The Persian Gulf War- Mid-Intensity. The American Civil War and World War II are examples that represent total war or near total war and had the

destruction of the enemy's government as their objective. However, the relationship should remain the same for more limited wars.

On August 2, 1990 Iraqi military forces invaded the nation of Kuwait. The Iraqis were able to conquer Kuwait in less than 2 days. While the Iraqis were consolidating their gains, Saudi Arabian fears of an Iraqi invasion increased. At the same time, other Arab nations voiced support for Iraq. However, the world at large condemned the invasion. The United States and Saudi Arabia built a coalition to oppose further Iraqi aggression and restore the balance of power that existed prior to Iraq's control of Kuwaiti oil.

On August 6, the King of Saudi Arabia requested US assistance in defending Saudi Arabia from Iraqi aggression. President Bush decided to deploy American troops to defend Saudi Arabia on August 8. The coalition against Iraq continued to build. The task to defend Saudi Arabia became known as Operation Desert Shield.

Step 2. Mission Analysis. The task to defend Saudi Arabia required US forces to deploy to the area and join Arab forces already in Saudi. Saudi Arabia is a large country but fairly sparsely populated. The important areas that required defense included the ports of debarkation, the major cities; the Muslim holy sites, and oil fields. The major threat consisted of heavy Iraqi forces that included long-range artillery, rockets, missiles, weapons of mass destruction, and the Iraqi air force as well as ground maneuver forces. These threats determined the type of US assets required to accomplish the mission.

Step 3. Determine Centers of Gravity. The enemy center of gravity became Iraq's ability, armed forces, to conduct offensive operations into Saudi Arabia. Since the force build up for Desert Storm was believed to be sufficient to deter an Iraqi attack when the deployment was completed, the friendly center of gravity was the coalition's military ability to hold Saudi Arabia.

Step 4. Analyze Centers of Gravity. The strengths of the friendly center of gravity included the strategic mobility assets of the US and the ability of the ground forces to be moved, the dominance of the US Air Force and Navy, and the training level of ground forces. The weaknesses of the coalition center of gravity included the distance the move required, the logistics required to sustain modern forces especially heavy forces, and the initial lack of ground and air forces. The vulnerabilities included the timeframe required to move the forces, lack of an initial theater missile defense capability, Arab members of the coalition could be convinced that Iraq was correct and they should withdraw from the coalition.

The strengths of the enemy center of gravity included its large mobile forces compared to the relatively small coalition forces initially; long range cannon, rocket, and missile systems, and weapons of mass destruction. The weaknesses of the enemy center of gravity included the logistic capability of the Iraqis, command and control, the air force when compared to the US air assets, and the training level of regular forces. The vulnerabilities of the enemy center of gravity included the air force, logistics when moving beyond 150 kms, command

and control when deviating from set plans, and regular army training level.

Step 5. Determine Decisive Points. The decisive points leading to the Iraqi center of gravity were its command and control, transportation infrastructure, mobile forces, air defense forces, and the logistics required for an attack deep into Saudi Arabia. The mobile forces, especially the more capable Republican Guard units, were required to close with the coalition forces, defeat the coalition rapidly, and to gain the ports of debarkation before further coalition forces could arrive. The task of defeating the mobile forces would be given to coalition ground forces. The tasks would be further broken down into defeating or in some cases destroying particular armored or mechanized formations, artillery, engineers, etc. Air assets would support engaged ground forces, and interdict forces moving to the front. The air defense forces included both ground based air defense and air assets. Air defense was required to maintain freedom of movement, and to deny the coalition the force multiplier air assets provide allowing the more numerous Iraqi ground units to defeat the coalition. The air component would have the task of defeating the Iraqi air defense capability. In some cases ground forces would support the air component. The logistics required for an invasion of Saudi Arabia would have been much greater than those required for the invasion of Kuwait. Saudi Arabia is about ten times as large as Kuwait. While Iraq would not have had to occupy all of Saudi Arabia, they would have had to move about twice as far as they had into Kuwait.³⁴ The air component commander would probably have the task of breaking or

controlling the logistic tail of the Iraqi army. Some ground units and naval units could have supported the air component.

Since Iraq did not attempt to attack deep into Saudi Arabia, it is not known if they would have met with success or not. The Iraqi leadership either never planned on attacking into Saudi Arabia or lost the will due to the coalition's military build up, negative world opinion, or a realization that Iraq could not mount an invasion on such a massive scale. This presented the coalition with the opportunity to eject Iraq from Kuwait and restore the previous balance of power in the area.

Step 2. Mission Analysis. As the military task changed from defending Saudi Arabia to ejecting Iraq from Kuwait, the basic elements of the plan changed from defensive to offensive. The coalition would now be conducting operations against the enemy while moving about 150 km. The task also limited the actions to ejecting Iraq from Kuwait and ensuring Iraq could not immediately threaten its neighbor with attack.

Step 3. Determine Centers of Gravity. The enemy center of gravity became Iraq's ability to hold Kuwait. The friendly center of gravity became the ability to project sufficient force into Kuwait to defeat Iraq's defense in Kuwait. As mentioned earlier, defeating the Republican Guard did not necessarily eject all Iraqi forces from Kuwait.

Step 4. Analyze the Centers of Gravity. The strengths of the enemy center of gravity include the prepared defensive positions, the Republican Guard

units, long range artillery, rockets, and missiles, weapons of mass destruction, ease of command and control when fighting in prepared positions. The weaknesses of the enemy center of gravity include command and control when not fighting in prepared positions, the air force, logistics, lack of night fighting equipment, inflexible fire support, training proficiency, leadership. The vulnerabilities of the enemy center of gravity include counterfire, air attack, logistics, open flanks, night attack, and air defense.

The coalition strengths include logistics, equipment, training, command, military intelligence, and air support. The weaknesses of the friendly center of gravity include the distance to be traveled, the multiple languages and cultures of the coalition, consumption rates of heavy forces, and control of forces. The vulnerabilities of the coalition include logistics on the move, meeting engagements when not massed, and flank attacks.

Step 5. Determine the Decisive Points. The decisive points leading to the Iraqi center of gravity were ground combat forces in the Kuwaiti Theater of Operations (KTO), air assets, weapons of mass destruction, the ability to sustain operations in the KTO, and its large number of forces. The task of defeating the ground forces were spread through coalition ground forces with the VII (US) Corps having responsibility for the Republican Guard. The air and naval components supported the ground component in accomplishing this task. The air component was tasked with defeating the Iraqi air assets with support from the other two components. The air component was also initially tasked to isolate

the area with support from the other two components. Eventually, the XVIII (US) Corps would also isolate the area.

The coalition would attack and defeat the Iraqis after a lengthy "air campaign" and a short ground war. Losses for the coalition were fairly light while Iraq suffered much greater losses to include some entire units. The coalition achieved its task, eject Iraq from Kuwait, by attacking the decisive points that led to defeating the center of gravity.

Peace Operations³⁵. Peace operations have and probably will continue to dominate US military operations. The relationship among tasks, centers of gravity, and decisive points remains true in peace operations since military units are still assigned tasks that are based on national objectives. At the present time, the US military is involved in a major peace operation in Bosnia. When the task for a peace operation is received, the commander must refine it into a mission statement just as he does in combat. Since peace operations may require contact with several factions, the commander and staff determine the centers of gravity for all parties involved in the peace operation. This includes all warring parties and the peacekeeping organization. As before, these centers of gravity must be determined in the context of the task and desired endstate. Decisive points are determined to "defeat", control, or preserve the centers of gravity.

When Bosnia-Herzegovina declared its independence from Yugoslavia, open conflict broke out among several parties. The Bosniaks, Muslims, were the

largest ethnic group in Bosnia but the weakest militarily at the start of the conflict. The Bosnian Serbs were the second largest ethnic group but the most powerful group. They have close relations with Yugoslavia, sometimes called Serbia. Serbia is another group involved in the conflict. The Bosnia Croats are the smallest of the three main ethnic groups but wield more power than their 17% of the population would indicate. They maintain close ties with the last party to the conflict, Croatia. In December 1995, the Dayton Peace Accords were signed which called for a NATO led international military force to enter Bosnia to maintain peace, and it established the framework for a Bosnian government.

The NATO objective is compliance with the Dayton Accords resulting in regional stability with an independent Bosnia. NATO's military task is to "ensure compliance with the Agreement by all Parties and to implement its military aspects. NATO will not impose a settlement on the Parties, but will take the necessary action to ensure compliance."³⁶

Step 2. Mission Analysis. Bosnia has never really existed as a country and must be created from a former province of the old Yugoslavia. The three ethnic groups believe they belong to different nationalities than the others. All three Bosnian groups require outside assistance to continue the conflict. Creating a nation will require considerable time.

Step 3. Determine the Center of Gravity. NATO's military center of gravity is its ability to keep the peace long enough to create a nation. Bosnia-Herzegovina's center of gravity is its ability to govern effectively. The Bosnian

Croat's center of gravity is its ability to keep the Federation of Bosnia-Herzegovina allied with Croatia. The Bosnian Serb's center of gravity is the ability to retain dominance over the 49% of the country they control. Croatia's center of gravity is its characteristic desire to be western and join the European Union. Serbia's center of gravity is its characteristic desire to lose no more of its standard of living and prestige.

Step 4. Analyze the Centers of Gravity. The strengths of the NATO center of gravity include the training, equipment, and potential combat power of their deployed forces. The weaknesses of the NATO center of gravity include deterioration of skills over time, and familiarity with the warring factions. The vulnerabilities of the NATO center of gravity include terrorist attacks, and complacency over time.

The Croatian strengths include its ties to the West. Its weaknesses include compliance in ethnic cleansing, and other "war crimes". It is vulnerable to attack based on its past actions and could be shunned by the West. The desire for ties with the West and membership in European Union will probably force Croatia to abide by the treaty.

The Bosnian Croat's strengths include unity, and the power structure of the Federation which gives half the power to the Bosnian Croat and half to the Muslims. The Dayton Accords allows the Bosnian Croat equal representation with the Bosniaks and Serbs. The Bosnian Croat weaknesses include "war crimes", and their minority of the population. The Bosnian Croats are vulnerable

to outside support provided to the Bosniaks from a major power that ignores their concerns and the possibility that Croatia will abandon them to gain admittance to the West.

The Serbian Strengths include their ties with Russia, military forces, and a traditional leadership role in the Balkans. The Serbian weaknesses include compliance in ethnic cleansing, and other "war crimes", Kosovo, and a weak economy. Serbian vulnerabilities include all of their weaknesses.

The Bosnian Serbs strengths include their control of about half the land in Bosnia, they are one of the two recognized entities in the Dayton Accords, their capable military forces, and their established a government. The Bosnian Serb weaknesses include lack of international recognition. They did not attend Dayton; Serbia attended for them. Additionally, they are losing support from friends because they are perceived as the major block to Dayton and because of their war crimes. The Bosnian Serb vulnerabilities include military force (their heavy equipment is in storage rusting but their potential enemies and NATO have operational equipment), and isolation due to loss of support.

Bosnia-Herzegovina's strengths are international recognition. However, the major weakness is the lack of an established credible Bosnia-Herzegovina government. Their vulnerability is that NATO's military may withdraw before they can exert their sovereignty.

Step 5. Determine the Decisive Points. For Bosnia-Herzegovina, the decisive points are when a government with all its agencies can govern the

multiethnic area. This includes a feeling of nationality, establishment of the army, etc. At the same time, the Federation and Bosnian Serbs must relinquish their power. Croatia and Serbia must stay out of Bosnia; this can be accomplished by a carrot and stick method; yield to some of their desires but be ready to punish them for committing acts as in the early 1990s or for being a roadblock to peace.

V. Conclusion.

A relationship exists among the task assigned to a military unit, the centers of gravity it determines for the operation, and the decisive points to defeat and preserve the centers of gravity. This relationship lends itself to a six-step method that can assist commanders and staffs in planning and executing operations. It appears to be valid for combat and peace operations. This method can be easily integrated into JOPES or the MDMP. The method helps nest the planning between echelons and assists in phasing the operation. The six steps are: Receive Task, Mission Analysis, Determine Centers of Gravity, Analyze Centers of Gravity, Determine Decisive Points, and Develop Concept.

Additionally, DOD can assist commanders and planners by adding the necessity for linking centers of gravity to the assigned task in the definition of centers of gravity and limiting friendly and enemy centers of gravity to one at each level of war. A change should be made to FM 100-7 to state that CINCs determine decisive points. Actually, the headquarters that determines a center of gravity must determine the decisive points for that center of gravity.

Commanders must recognize that at operational and tactical levels the center of gravity will almost always be the enemy's military means to resist. Not the entire force but that part of the force required to resist. Additionally, selecting the wrong center of gravity will lead to an operation that may move the enemy but will not place him at the desired endstate.

Appendix I. Analysis of the Relationship among Tasks, Centers of Gravity, and Decisive Points in World War II

World War II is the largest and most destructive war in the history of man. The war included combat operations on all six inhabited continents and in every major body of water. In all over 50 million people died due to the war. During the war, Germany, under the control of the National Socialists, Italy, under the Fascists, and Japan, under military control, fought against the democratic United States of America, Great Britain and the Commonwealth, and France, and the communist Union of Soviet Socialist Republics. Together Germany, Italy, and Japan and some lesser countries formed the Axis. However, the three Axis powers never fully developed combined operations, at least not as equals, and never created coalition objectives. They all maintained their own national objectives.

The United States, Great Britain, France, Soviet Union, and others formed the Allies. While coalition or combined warfare is never easy, the Allies were more unified than the Axis. The United States, Britain, the Commonwealth, and France coordinated operations and fought in support of each other effectively. In two major agreements, the Allies, including the Soviets, agreed that the coalition's objective would be the unconditional surrender of the Axis and a Europe "first" policy.

For the Allies the coalition objective became or took precedence over their individual national objective. Unconditional Surrender became the policy of the Allies about the time of the Casablanca Conference. In essence,

Unconditional Surrender meant the destruction of the Axis nations. In effect, the objective was to change the governments of Germany, Italy, and Japan. The governments could change two ways. Either, the national power-base could lose its will and agree to meet Allied demands or the governments could be forcibly changed by destroying their national power until the government and nation could no longer resist the will of the Allies. The national power-base for these countries was not the people but a smaller group formed from political parties or through nationalism. The majority of people did support these groups either willingly or because of coercion. Since the Unconditional Surrender policy removed any possibility that the current government could remain in power, the national authorities never lost their will to resist. Instead, the Allies had to destroy the national power of the Axis nations. In particular, the Allies had to destroy the Axis' economic and military power. The Axis nations were military and economic powers. Their diplomatic and informational elements were limited compared to the Allies. Additionally, the overt aggression practiced by the Axis limited their diplomatic and informational elements outside their own areas.

The national centers of gravity for the Axis nations were their armed forces' ability to defeat Allied attacks since the Axis were primarily military powers. To call the Axis' militaries the center of gravity is accurate since this was their means to resist the Allies. The Allies dominated diplomatic, informational, and economic arenas early in the war. The military was definitely powerful since the Axis relied upon it to maintain control outside their homelands.

The Axis relied upon their economies to maintain their forces and provide a minimum standard of living for their people. Providing for the people helped ensure loyalty. If Axis diplomatic or informational efforts had been more effective, military defeat may not have meant national defeat. Defeating any of the other elements without defeating the military would not defeat the Axis.

The decisive points leading to the national centers of gravity included the specific military assets that provided the Axis the means to resist. By defeating the Axis military, the Allies gained a "marked advantage" in their ability to invade, occupy, and impose a new government on the people. By breaking the territorial integrity of the Axis nations, the Allies gained a "marked advantage" in limiting the Axis ability to govern their territory, and to sustain their militaries and economies. It also limited the Axis ability to move forces to critical areas reducing their mass at these points. Additionally, it reduced their credibility to the world. By defeating the economic stability of the Axis nations, the Allies reduced their ability to sustain their military forces and maintain the loyalty of the common man.

The military was the pre-eminent element of national (coalition) power during the war and it had the task of not just defeating but destroying the Axis militaries. The military sought to disarm or destroy Axis' military power to resist, the center of gravity.

Step 2. Mission Analysis. The Allies have to project power into the Axis nations to destroy their militaries. The Allies have to defeat the axis ability to

maintain fielded forces.

Step 3. Determine the Centers of Gravity. The enemy center of gravity for the Allied military effort was the capability of the Axis military to defeat the Allied attacks. To defeat the Allied attacks, the Axis required effective fielded military forces. The friendly center of gravity was the ability to project power throughout the Axis territory.

Step 4. Analyze the Centers of Gravity. The strengths of the Axis military centers of gravity are the fielded forces, military leaders and their tactical abilities on the battlefield, the proximity of the forces to major supply sources, and the proximity of the armies to transportation assets that can carry replacements and supplies. Additionally, the German strengths included doctrine, equipment, and leadership. The Japanese strengths included their overseas holdings, and the quality of their navy, the center of gravity for the Pacific Ocean campaign. The weaknesses of the Axis military center of gravity were no coalition plan, lack of resources, logistics, and the asymmetrical aspects of their forces. In Germany the ground forces dominated. While in Japan's Pacific Ocean campaign, naval forces dominated. As in the American Civil War, all of the weaknesses were also vulnerabilities that were attacked creating opportunities for the Allies to attack their strengths.

The friendly center of gravity strengths included leadership, quantity, logistics, and dominating air and naval forces. These formed the basis for decisive points and operational centers of gravity. The weaknesses included

distance from supply sources, and less capable forces initially. The Axis nations would attack these vulnerabilities but not coordinated among the coalition.

Step 5. Determine the Decisive Points. The decisive points for the military to defeat the Axis included destroying the fielded forces, interdicting force creation, sustaining, and regenerating operations, denying the Axis freedom of movement, and occupying Axis territory. Destroying the fielded forces on the battlefield reduced Axis strength and ability to resist; destruction of the fielded forces was the quickest path to the center of gravity. However, a decisive battle was not fought. The Allies were able to interdict Axis creation, sustaining, and regeneration operations. Usually, the Allies used strategic bombing against Germany, and bombing and submarine warfare against Japan. Occupying Axis territory denied him the assets required to maintain strength. Eventually their defense was not allowed to preserve or gather strength as in Clausewitz' "the advantages of the theater of operations."

ENDNOTES

- ¹ The American Heritage Dictionary of the English Language, William Morris, ed., 1976, Boston, Ma. Houghton Mifflin Company pg. 1317.
- ² The American Heritage Dictionary of the English Language, William Morris, ed., 1976, Boston, Ma.: Houghton Mifflin Company pg. 1318.
- ³ Joint Pub 1-02, Approved Terminology, DOD Dictionary, 23 March 1994, updated through April 1997, JEL 1997, pg. 348.
- ⁴ Ibid., 87.
- ⁵ FM 100-5, OPERATIONS, June 1993, Washington, DC: Headquarters Department of the Army, pg. Glossary-1.
- ⁶ Von Clausewitz, Carl, On War, Indexed Edition, edited and translated by Michael Howard and Peter Paret, 1989, Princeton, NJ: Princeton University Press, pg. 595-596.
- ⁷ Joint Pub 3-0, Doctrine for Joint operations, 1 February 1995, JEL 1997, pg. I-2.
- ⁸ FM 100-7, Decisive Force: the Army in Theater Operations, May 1995, Washington, DC: Headquarters Department of the Army, pg. 3-0 – 3-1.
- ⁹ Von Clausewitz, Carl, On War, Indexed Edition, edited and translated by Michael Howard and Peter Paret, 1989, Princeton, NJ: Princeton University Press, pg. 75.
- ¹⁰ AFSC Pub 1, The Joint Staff Officers Guide, 1997, Norfolk, Va: Armed Forces Staff College, pg. O-52.
- ¹¹ The American Heritage Dictionary of the English Language, William Morris, ed., 1976, Boston, Ma.: Houghton Mifflin Company pg. 226.
- ¹² The American Heritage Dictionary of the English Language, William Morris, ed., 1976, Boston, Ma.: Houghton Mifflin Company pg. 199.
- ¹³ Strange, Joe, Centers of Gravity and Critical vulnerabilities: Building on the Clausewitzian Foundation So That We Can All Speak the Same Language, Perspectives on Warfighting, Number Four, Second Edition, 1996, Quantico, Va: Marine Corps University Foundation, pg. 43.
- ¹⁴ Dr Strange points this out in his monograph.
- ¹⁵ Warden, Col. John A. III, The Air Campaign, 1989, Washington, D.C.: Brassey's (US), pg. 7.
- ¹⁶ The American Heritage Dictionary of the English Language, William Morris, ed., 1976, Boston, Ma.: Houghton Mifflin Company pg. 1438.
- ¹⁷ Warden, Col. John A. III, The Air Campaign, 1989, Washington, D.C.: Brassey's (US), pg. 7.
- ¹⁸ Joint Pub 3-0, Doctrine for Joint operations, 1 February 1995, JEL 1997, pg. III-21.
- ¹⁹ Joint Pub 3-0, Doctrine for Joint operations, 1 February 1995, JEL 1997, pg. III-21
- ²⁰ Joint Pub 3-0, Doctrine for Joint operations, 1 February 1995, JEL 1997, pg.

III-11 – III-12.

²¹ Joint Pub 1-02, Approved Terminology, DOD Dictionary, 23 March 1994, updated through April 1997, JEL 1997, pg. 143.

²² FM 100-5, OPERATIONS, June 1993, Washington, DC: Headquarters Department of the Army, pg. 6-7 - 6-8.

²³ Jomini, Antoine H., "Summary of the Art of War," a condensed version in Roots of Strategy, Book 2, edited by Brig. Gen. J. D. Hittle, 1987, Harrisburg, Pa: Stackpole Books, pg. 467.

²⁴ FM101-5-1, Operational Terms and Graphics, 30 September 1997, Washington, DC: Headquarters, Department of the Army, pg. 1-46.

²⁵ *bid*, pg. 1-46.

²⁶ Taken from a note written by Dr. James Schneider of the School of Advanced Military Studies.

²⁷ Von Clausewitz, Carl, On War, Indexed Edition, edited and translated by Michael Howard and Peter Paret, 1989, Princeton, NJ: Princeton University Press, pg. 605.

²⁸ FM 100-5, OPERATIONS, June 1993, Washington, DC: Headquarters Department of the Army, pg. 6-1.

²⁹ This point was highlighted in discussion with Dr. James Schneider of the School of Advanced Military Studies.

³⁰ FM 100-7, Decisive Force: the Army in Theater Operations, May 1995, Washington, DC: Headquarters Department of the Army, pg. 3-0

³¹ FM 100-7, Decisive Force: the Army in Theater Operations, May 1995, Washington, DC: Headquarters Department of the Army, pg. 3-3

³² The federal government would add two more states, West Virginia and Nevada, during the war.

³³ Von Clausewitz, Carl, On War, Indexed Edition, edited and translated by Michael Howard and Peter Paret, 1989, Princeton, NJ: Princeton University Press, pg. 365.

³⁴ Scales, Robert H., Certain Victory: The US Army in the Gulf War, 1994, Fort Leavenworth, Ks., US Army Command and General Staff College Press, pg. 66.

³⁵ Some of the ideas in this section were taken from SAMS AY 97-98 Seminar 4 work during an exercise on Bosnia. While some of the ideas originated in the exercise, the work presented here diverged from the group effort of the exercise.

³⁶ NATO at a Glance, 1996, Brussels, Belgium: NATO Office of Information and Press, pg. 49.

Bibliography

FM 100-5, OPERATIONS, June 1993, Washington, DC: Headquarters Department of the Army.

Von Clausewitz, Carl, On War, Indexed Edition, edited and translated by Michael Howard and Peter Paret, 1989, Princeton, NJ: Princeton University Press.

Jomini, Antoine H., "Summary of the Art of War," a condensed version in Roots of Strategy, Book 2, edited by Brig. Gen. J. D. Hittle, 1987, Harrisburg, Pa: Stackpole Books, pg. 467.

FM101-5-1, Operational Terms and Graphics, 30 September 1997, Washington, DC: Headquarters, Department of the Army, pg. 1-46.

AMSP Course 1 Foundation of Military Theory, Syllabus, AY 97-98, Fort Leavenworth, Ks: School of Advanced Military Studies, US Army Command and General Staff College.

Strange, Joe, Centers of Gravity & Critical Vulnerabilities: Building on the Clausewitzian Foundation So That We Can All Speak the Same Language., Perspectives on Warfighting, No. 4, 1996, Quantico, Va., Marine Corps University Foundation.

TRADOC Pamphlet 525-5, Force XXI Operations A Concept for the Evolution of Full-Dimensional Operations for the Strategic Army of the Early Twenty-First Century, 1 August 1994, Department of the Army, Fort Monroe, Virginia: Headquarters US Army Training and Doctrine Command.

Scales, Robert H., Certain Victory: The US Army in the Gulf War, 1994, Fort Leavenworth, Ks., US Army Command and General Staff College Press.

Fuller, J. F. C., The Foundations of the Science of War, 1993, Fort Leavenworth, Ks., US Army Command and General Staff College Press.

Joint Pub 1, Joint Warfare of the US Armed Forces, 11 November 1991, Washington, DC, National Defense University Press.

Warden III, John A., The Air Campaign: Planning for Combat, 1988, Washington, DC, National University Press.

FM 100-7, Decisive Force: The Army in Theater Operations, 1995, Washington DC, Headquarters, Department of the Army.

Hattaway, Herman and Jones, Archer, How the North Won, 1991, Urbana, Il.,

University of Illinois Press.

Karnow, Stanley, Vietnam: A History, 1983, New York, NY., The Viking Press.

The American Heritage Dictionary of the English Language, William Morris, ed., 1976, Boston, Ma. Houghton Mifflin Company.

Joint Pub 1-02, Approved Terminology, DOD Dictionary, 23 March 1994, updated through April 1997, JEL 1997

Joint Pub 3-0, Doctrine for Joint operations, 1 February 1995, JEL 1997.

AFSC Pub 1, The Joint Staff Officers Guide, 1997, Norfolk, Va: Armed Forces Staff College

NATO at a Glance, 1996, Brussels, Belgium: NATO Office of Information and Press.

Matloff, Maurice and Snell, Edwin M., The War Department: Strategic Planning for Coalition Warfare, 1941-1943, 1953, Washington, DC; Office of the Chief of Military History, Department of the Army.

Porter, Bruce D., War and the rise of the State, 1994, New York, NY: The Free Press.

Kaplan, Robert D., Balkan Ghosts, 1993, New York, NY: St. Martins Press.

FM 100-23, Peace Operations, December 1994, Washington DC, Headquarters, Department of the Army.

FM 101-5, Staff Organization and Operations, 1997, Washington DC, Headquarters, Department of the Army.

Joint Pub 5-00.1, Doctrine for Joint Campaign Planning, June 1992, Washington, DC: Office of the Chairman Joint Chiefs of Staff.

FMFM 1, Warfighting, 6 March 1989, Washington, DC: Headquarters, United States Marine Corps.

FMFM 1-1, Campaigning, 20 January 1990, Washington, DC: Headquarters, United States Marine Corps.

Naval Doctrine Publication 1, Naval Warfare, 24 March 1994, Washington, DC: Office of the Chief of Naval Operations.

Air Force Doctrine Document 1, Air Force Basic Doctrine, September 1997,
Maxwell AFB, AL: Headquarters, Air Force Doctrine Center.

Leckie, Robert, Delivered From Evil, 1987, New York, NY: Harper and Row,
Publishers.